

REMARKS

This amendment responds to the Action mailed on January 3, 2006. The amendment should be entered since it clearly places the application in condition for allowance. The proposed amendments to the claims are only for purposes of clarifying the language and do not raise any new issues. If the amendment is not entered for purposes of placing the application in condition for allowance, then its entry is requested for purposes of appeal.

Claims 1-8 and 11-20 are pending. Claim 1 is an independent method claim from which claims 2-8 and 11-12 depend. Claim 13 is the apparatus analog of claim 1 and claims 14-20 depend from it.

Claims 1-8 and 11-20 are proposed to be amended to provide a proper antecedent for the terms noted by the Examiner. The terms “starting time” and “ending time” of a packet transmission have been used in the independent claims 1 and 13. These terms were basically already present in pending claims, such as claims 4 and 14. Therefore, no new subject matter is being introduced and the scope of the claims is submitted to be unchanged. Also, the amendment makes express the inherent feature that the claims operate on each of successive packets.

The dependency of claim 5 questioned by the Examiner, is correct. Claim 5 depends from claim 1, while claim 4 depends from claim 5 and further defines the parameter t_{used} .

Claims 1-8 and 11-20 are rejected under 35 U.S.C. §102(b) by the newly cited patent to Wang, U.S. 5,867,230.

Wang is directed to solving a problem imposed by the restriction of an available data rate (bandwidth) of 56 Kb/s, e.g., an old-type voice modem, onto which Wang proposes to “stream” data, particularly video, which has a much higher bandwidth demand. Wang does this by encoding and decoding the data as a sequence of “frames” (column 2, lines 56-63). The frames are encoded at a variable bit rate and “packetized”. Wang does not make clear if the size of his packets are the same.

In the invention as set forth in the claims, referring particularly to the independent claims 1 and 13, successive packets each of a known packet size (P) are transmitted to obtain a selected target bandwidth (B_T). This is achieved by computing a wait time (t_w) between the start of each of the successive packets. The wait time t_w is computed by using the algorithm $t_w = \frac{P}{B_T}$. The transmission of the packets is controlled so that there is a residual time (t) between the ending of the transmission of one packet and the starting of transmission of the next packet to establish the wait time (t_w). As seen in claim 1, first the wait time t_w is computed and then packet transmission is controlled to achieve the computed wait time.

The Patent Office cites Wang, column 4, lines 8-15 and column 5, lines 38-46 for teaching the claimed step of computing a wait time t_w according to the algorithm $t_w = \frac{P}{B_T}$. However, Wang does not appear to teach or suggest the specific algorithm of claims 1 and 13 of the application. All that is taught by the first cited portion, at column 4, lines 8-16, is that there is a packetizer 230 controlled by a bit rate controller 210 to packetize the information into a file 235 of a specified format.

The second cited portion cited by the Patent Office, at column 5, lines 38-46, deals with the skipping of frames to be transmitted based on the value of a quantization parameter Quant. The parameter Quant is related to the detail of the picture that is being encoded into frames (column 5, lines 5-12). As set forth in the cited portion at column 5, lines 38-46, frames are skipped based on the Quant value. The Quant value is not a measure of time as is the wait time parameter t_w of the application claims. Quant is a measure of video picture detail which determines how much data there is that has to be encoded and transmitted. It has nothing to do with a time value.

The Patent Office also cites the formula at column 6, line 31 of Wang. This

formula deals with adjusting a BitBacklog value. BitBacklog is defined at column 6, lines 5-8:

BitBacklog effectively keeps a running total of the number of bits used in encoding the sequence in comparison to the number of bits that can be sent up to the current time, i.e., a budgeted amount.

Accordingly, applicant fails to see any disclosure in Wang that fairly can be seen as corresponding to the algorithm $t_w = \frac{P}{B_T}$ of claim 1 and claim 13.

Next, the Patent Office cites to column 4, lines 41-56 and column 5, lines 50-66 of Wang for teaching the computation of the claimed residual time t of the application claim. However, column 4, lines 41-56 teaches using unused bandwidth (frames encoded at a rate lower than the target rate of the encoder) in a conservation mode “to transmit information corresponding to a future portion of the video”. This is far from a teaching of the claimed residual time t which is defined in claims 1 and 13 as the time between the ending time of transmission of one packet and the starting time of transmission of the next packet to establish the wait time (t_w). Respectfully, this cited portion of Wang hardly meets this definition.

As to Wang, column 5, lines 49-67, this is directed to seeking to maintain the quantization of the data encoding at a constant level. As discussed above, this depends on the informational content of a frame. Again, respectfully, this has nothing to do with the residual wait time (t) of claims 1 and 13 which is clearly defined as a residual between the ending time of transmission of one packet and the starting time of transmission of the next packet to establish the computed wait time (t_w) during the transmission of successive packets.

The invention of Wang relative to packet transmission appears to be best set forth in the two clauses of its claim 2:

. . .a packetizer for forming packets of video data that have been encoded at a variable bit rate, the packetizer maintaining a channel budget of the amount of data in the packets and inserting server time stamps into the formed packets, the server time stamps being calculated so that the sending of the packets, based on the time stamps, will correspond to a substantially constant bitrate corresponding to the channel budget; and

a server, having logic for analyzing the server time stamps of the video packets and for scheduling the sending of packets on to a network based on the time stamps.

Scheduling the sending of packets based on time stamps would at best probably only set the order of transmission of the packets. Clearly, there is no recognition in Wang of the problem that the invention is intended to solve, as discussed in the beginning of the Specification and there is no solution using the procedure and apparatus as set forth in the independent claims 1 and 13.

The outstanding rejection based on anticipation (35 U.S.C. §102(b)) therefore is not supported. As set forth at MPEP:

To anticipate a claim, the reference must teach every element of the claim.

A claim is anticipated only if each and every element set forth in the claim is found, either expressly or inherently disclosed, in a single prior art reference (citing a case)

As demonstrated above, the newly cited Wang reference cannot meet the express or inherent disclosure requirements under the statute.

The independent claims 1 and 13 define novel and advantageous subject matter not disclosed or hinted at in Wang. As discussed above, Wang and the application are directed to solving different problems and each operates in a different way. Therefore, these claims and their respective dependent claims clearly are patentable and should be allowed.

In view of the above amendment, applicant believes the pending application is
in condition for allowance.

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